Daily Diary Report by Bid Item

Contract No.: 04-0120F4
Diary #: 1248 **Const Calendar Day:** 821 **Date:** 03-Sep-2014 **Wednesday**
Inspector Name: Brignano, Bob **Title:** Transportation Engineer
Inspection Type:
Shift Hours: **Break:** **Over Time:**
Federal ID:
Location:
Reviewer: Schmitt, Alex **Approved Date:** **Status:** Submit

04-0120F4
04-SF-80-13.2/13.9
Self-Anchored
Suspension Bridge

Weather

Temperature **7 AM** **12 PM** **4PM**
Precipitation **Condition** overcast am, clear pm

Working Day ☑ If no, explain:

Diary: Dispute ☐

General Comments

CCO 314, SAMPLING AND TESTING A354 GRADE BD MATERIAL:

The status of the 2 test rigs in this current phase of the Townsend Test (Test IV) is as follows:
Rod 18 (Dry 2008 Rod, ID S1-A7, Bottom): Tensioned to 0.80 Fu Today
Rod 19 (Dry 2008 Rod, ID S2-H6, Bottom): Tensioned to 0.80 Fu Today

ABF Engineer Kelvin Chen is working part time in the field and office on CCO 314.

There is work in the field for the scheduled jacking step at TR's 18 & 19. Crews at the Pier 7 warehouse are working an 8-hour shift 0700 through 1530. Working on the CCO operation today are Ironworker Jared Garrett (~0910~0935 for ~1/2 hr) and Ironworker Foreman Obra Paulk (~0910~0935 for ~1/2 hr). For the previous jacking steps for this Phase of the Townsend Test (Test IV), ABF was working a shift that started at 0600 and included taking the morning break at 0900 with the jacking step happening after the end of the scheduled union break, but with yesterday being the first day of new shift hours that start at 0700 with the morning break at 1000, we request that the ironworkers be at the test rig site approximately 0915 so that the jacking steps still happen roughly 48-hours from the previous jacking steps and there is enough time to complete the jacking steps before the scheduled 1000 morning union break. Later in the day, starting at ~1230 after the end of the lunch break, the ironworkers spend a few minutes to unload a pallet from a delivery truck with CCO 314 material – pallet for CT-METS with remnant rod pieces from lab testing of the rods in previous phases of the Townsend Test (Test IV). The ABF timesheet rounds up the time to 1 hour for each ironworker, taking into consideration travel time from elsewhere at the Pier 7 warehouse area and disruption to the other scheduled operations for the jacking step and for the later time to unload a delivery truck. The non-CCO 314 operations elsewhere at the Pier 7 warehouse area at other times in the day are not covered by this diary.

VGO is on site today for the jacking step at TR's 18 & 19. From VGO, Dave Van Dyke starts work on site at ~0800. He works on the morning data reports before this morning's scheduled tensioning step. VGO is present for live data display during the jacking step at the test rigs. Then, VGO works on the data reports from the jacking step at the test rigs. VGO leaves the site ~1000. Dave flies from the Bay Area to Oregon this afternoon. Remotely, at the end of the day, VGO produces and sends the pm data reports.

For the jacking step at the 2 test rigs, present from the DJV is Luis Funes. Present from CT-METS for AE is Saied Khan (communicate with Mistras personnel offsite). Two ABF ironworkers are present to operate the hydraulic pump, tighten the nut, and deal with any issues that may come up during the jacking operation, with VGO present to monitor the loads being used to guide the operations.

Test Rig #18 (Dry 2008 Rod, ID S1-A7, Bottom) Jacking Step:
This is the 9th jacking step and the rod is being jacked to 0.80 Fu. The post-seating of the nut target is 668.640 +10/-0 kips. The expected hydraulic pressure at this locked off force is 4,800 psi. Based on the previous jacking step (9/1/2014 - 0.75 Fu), the expected seating loss is at least 45 kips (plus some expected bleed loss during AE check), so the initial jacking target is ~715~725 kips. The tension on the rod at the start of the operation is 628 kips (the 0.75 Fu load left on the rod 2 days ago was 633 kips for a delta of -5 kips), with this tension difference possibly due to thermal differences between 9/1/2014 and today). Jacking is started at 0915. At 4,800 psi hydraulic pressure per the dial gauge, the primary strain gauges give a force of 671 kips. The hydraulic pressure is increased to 5,300 psi and the primary strain gauges give a force of 721 kips. The AE is checked with the ok given at 0918. The nut is tightened. Prior to bleeding off the jacks, the primary strain gauges give a force of 719 kips (bleed loss = 2 kips). After bleeding off the jacks, the primary strain gauges give a force of 673 kips (seating loss = 46 kips). The force is within the specified tolerance.

Test Rig #19 (Dry 2008 Rod, ID S2-H6, Bottom) Jacking Step:
This is the 9th jacking step and the rod is being jacked to 0.80 Fu. The post-seating of the nut target is 668.640 +10/-0 kips. The expected hydraulic pressure at this locked off force is 4,800 psi. Based on the previous jacking step (9/1/2014 - 0.75 Fu), the expected seating loss is at least 45 kips (plus some expected bleed loss during AE check), so the initial jacking target is ~715~725 kips. The tension on the rod at the start of the operation is 632 kips (the 0.75 Fu load left on the rod 2 days ago was 636 kips for a delta of -4 kips), with this tension difference possibly due to thermal differences between 9/1/2014 and today). Jacking is started at 0920. At 4,800 psi hydraulic pressure per the dial gauge, the primary strain gauges give a force of 669 kips. The hydraulic pressure is increased to 5,350 psi and the primary strain gauges give a force of 722 kips. The AE is checked with the ok given at 0925. The nut is tightened. Prior to bleeding off the jacks, the primary strain gauges give a force of 717 kips (bleed loss = 5 kips). After bleeding off the jacks, the primary strain gauges give a force of 668.5 kips (seating loss = 49 kips). This is not within tolerance – force is low by less than a kip from the minimum target but it is continuing to drop, so another jacking step is needed. At 5,350 psi hydraulic pressure per the dial gauge, the primary strain gauges give a force of 727 kips (5 kips higher). The AE is checked with the ok given at 0929. The nut is tightened. Prior to bleeding off the jacks, the primary strain gauges give a force of 725 kips (bleed loss = 2 kips). After bleeding off the jacks, the primary strain gauges give a force of 677 kips (seating loss = 48 kips). The increase of 9 kips is from 5 kips higher jacking force, 3 kips less bleed loss, and 1 kips less seating loss. The force is within the specified tolerance.

Today, a pallet arrives for CCO 314. This is a pallet with A354 Grade BD material that was previously sent to a lab for testing and is now being returned from the lab to the jobsite for storage. This A354 Grade BD material is from previous phases of the Townsend Test. This pallet is for CT-METS but because CT does not have the ability to unload a delivery truck with a forklift at the office trailers, it is being sent to ABF to unload. This is the first of two pallets expected this week. The pallet is from the Faircloth Lab in Alabama. The pallet arrives during the lunch break and is unloaded from the delivery truck by ABF ironworkers with a forklift when the lunch break ends at 1230. Then, at approximately 1430, ABF Laborer Ignacio (Nacho) Garcia unscrews the lid of the box on the pallet – this is a few minutes of work and is not charged by ABF. Later in the day between ~1600 and ~1630, CT-METS (Elaine Yip and Saied Khan) and I unpack the pallet and move the contents to the CT-METS trailer for sorting, repackaging, and storage.

A 40kW generator – MQ Power 40 – ABF ID 002051 is used briefly for the jacking operations and is on idle/standby at the test rig work area the remainder of the day. A Hydraulic Pump for running the jacks is used briefly for the jacking operations and is on idle/standby at the test rig work area the remainder of the day. A forklift is used by the ironworkers to unload a CCO 314 pallet for CT-METS in the afternoon from a delivery truck.

Note that there is k-rail at this work area. All the remaining k-rail at the CCO 314 test rig site is State owned. There are 20 pieces of 10' bought k-rail. Of the 20 pieces, 16 are installed in test rigs and 4 are spare/extra k-rail that are set aside.

To elevate k-rail and sandbags, crane mats (built from 12x12's) and timber blocking (12x12's) are used.

The crane mat and 12x12's quantities are as follows:
1 each 4'x20' crane mat (1 x 80 LF)
1 each 5'x19' crane mat (1 x 95 LF)
2 each 5'x20' crane mats (2 x 100 LF)
2 each 5'x16' crane mat (2 x 80 LF)
~64 LF additional 12x12's
Total 12x12's quantity = 599 LF ~ 600 LF

The agreed extra work with ABF is as follows:
Ironworker Jared Garrett - 1 hr
Ironworker Foreman Obra Paulk - 1 hr
Engineer Kelvin Chen - 1 hr
40 kW Generator - 0.5 hr
12x12 timber - 600 LF
See the attached Extra Work Order - Signed with ABF for CCO 314 work

INSPECTOR OT REMARK:

Office and field 2 hours: ABF is working a shift at the Pier 7 warehouse area between 0700 and 1530, and I am only in the field for portions of this time. I am in the office for various work related to A354 Grade BD bolts and rods, including reviewing the A354 Grade BD report (last draft is from last week, and it still needs updating, with comments requested by a few days from now). Also in the field, ~1600 to ~1630, I assist CT-METS with moving A354 Grade BD material (from a lab that did post fracture analysis) from a pallet at ABF's receiving area to the CT-METS bolt storage conex. My shift is 0700 to 1730 and my OT is 1530 to 1730.